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STORAGE

CATALOGUE

No 7 Pl 4

OF THE

AUSTRALIAN BIRDS

IN THE

AUSTRALIAN MUSEUM,

AT

SYDNEY, N. S. W.

PART IV.

PICARIÆ.

Sub-order HALCYONES.

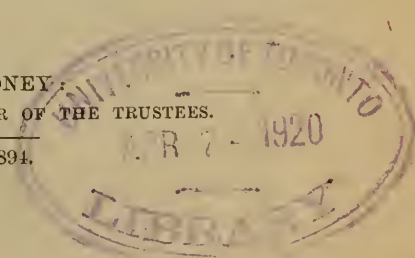
BY

E. P. RAMSAY, L.L.D., F.R.S.E., &c.,

CURATOR.

SYDNEY:
PRINTED BY ORDER OF THE TRUSTEES.

1894.



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CATALOGUE
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INTRODUCTION.

THIS Part IV. of the Catalogue of Australian Birds, contains a description of all the species of the Sub-order Halcyones or Kingfishers known to inhabit Australia, in all—including varieties—thirteen species, with a list of such specimens as are contained in the Museum; in addition others have been examined in the Macleayan Museum at the University and the Dobroyde Collection at Ashfield, in all about 200 examples coming from various parts of Australia. We trust that our correspondents throughout the Colonies will, by forwarding specimens in various stages of plumage from the nestling to the adult, render our National Collection as complete as possible.

I have much pleasure in acknowledging the care and assiduity bestowed by my Assistant, Mr. A. J. NORTH, in the preparation of this work.

E. P. RAMSAY.

"*Pres.*" stands for Presented.

" <i>Col.</i> "	„	Collected by Museum employees
" <i>Pch.</i> "	„	Purchased.
" <i>Exch.</i> "	„	Exchanged.
" <i>ad.</i> "	„	adult or full grown.
" <i>juv.</i> "	„	young.
" <i>sk.</i> "	„	skin—not "set up."
" <i>O.C.</i> "	„	Old Collection.
" <i>♂</i> "	„	male.
" <i>♀</i> "	„	female.

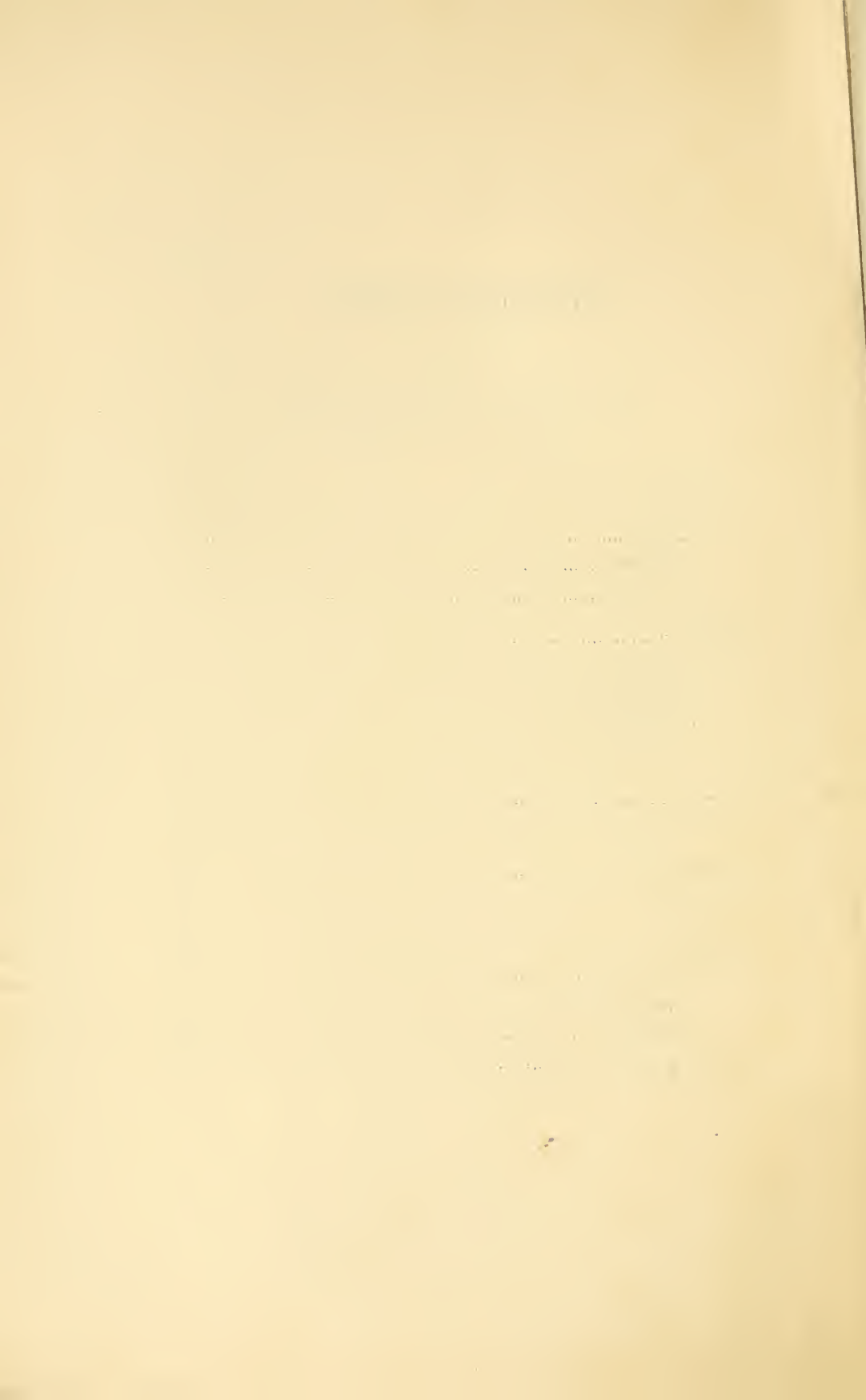
SYSTEMATIC INDEX.

ORDER PICARIÆ.

SUBORDER HALCYONES.

Subfam. DACELONINÆ.

	Page
1. Dacelo	1
1. gigas.....	1
2. leachii	4
3. cervina	5
2. Halcyon	7
1. sanctus.....	7
2. pyrrhopygia	9
3. sordidus	11
4. macleayi	13
3. Syma	15
1. flavirostris	15
4. Tanysiptera.....	16
1. sylvia	16
5. Alcyone	17
1. azurea	17
<i>Var. diemenensis</i>	19
2. pulchra.....	20
3. pusilla	21



ORDER PICARIÆ.

Suborder HALCYONES.

Subfamily DACELOININÆ.

1. DACELO.

1. *Dacelo gigas*.

Great Brown Kingfisher, Laughing Jackass.

Grand Martin-pêcheur de la Nouvelle Guinée, *Sonn., Voy. Nouv. Guin.*, p. 171, t. cvi. (1776).

Martin-pêcheur de la Nouvelle Guinée, *Daubent, Pl. Enl.* 663 (1780).

Great Brown Kingfisher, *Lath., Gen. Syn.* i part 2, p. 609, (1782); *Shaw in White's Journ. Voy. N.S.W.* pl. opp. p. 137 (1790); *Phill. Voy. Bot. Bay, 2nd edit.* pl. opp. p. 150 (1790).

Alcedo gigas, *Bodd., Tabl. des Pl. Enl.* p. 40 (1783).

Alcedo fusca, *Gmel. edit. Linn. Syst. Nat.* Vol. i. p. 454 (1788 *ex Lath.*).

Alcedo gigantea, *Lath. Ind. Orn.* i. p. 245 (1790); *Bonn. et Vieill. Enc. Meth.* i. p. 282 (1823); *Shaw, Gen. Zool.* Vol. viii. p. 53 (1811).

Dacelo gigantea, *Leach, Zool. Misch.* Vol. ii. p. 126, pl. cvi. (1815); *Vig. & Horsf., Linn. Trans.* Vol. xv. (1826) p. 204; *Steph., Gen. Zool.* ii. p. 101 (1826); *Bennett, Bush Wander. in N.S.W.* (1834) p. 221; *Gould, Birds Austr.* fol. Vol. ii. pl. 18 (1848); *Sclat., List. Vertebr. An. Zool. Soc.* (1866) p. 90; *Huxley, Proc. Zool. Soc.* 1867, p. 447; *Diggles, Orn. Austr.* pl. 23 (1870); *Schmidt, Proc. Zool. Soc.* 1880, p. 313; *Forbes, Ibis*, 1881 p. 8; *Broadb., Proc. Roy. Soc. Queensld.* Vol. i. 1884, p. 94; *id.* Vol. ii. 1885, p. 120.

Dacelo gigas, *Gray, Gen. Bds.* Vol. i. p. 78 (1846); *id. Cat. Fiss. Brit. Mus.* p. 51 (1848); *Reichb., Handbk. Alced.* p. 40 t. ccccxvii. fig. 3161-63 (1851); *Cass., Cat. Hal. Phil. Mus.* p. 14 (1852); *Gould, Handbk. Bds. Austr.* Vol. i. (1865) sp. 60, p. 122; *Gray, Hand-l. Bds.* Vol. i. p. 82 (1869); *Sharpe, Mon. Alced.* pl. 112, p. 285 (1868-71);

Schl., Mus. Pays-Bas, Alced. Revue, p. 11 (1874); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 179, sp. 61; *Salvad., Orn. Pap. et Molucc.* Vol. i. (1880) p. 499; *Broadb., P.R.S. Queensld.* Vol. ii. 1885, p. 120; *Ramsay, Tab. List Austr. Bds.* sp. 67, p. 3 (1888); *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, 1888, p. 1774; *Cox & Ham., Proc. Linn. Soc. N.S.W.* 2nd Series, Vol. iv. (1889) p. 401; *North, Aus. Mus. Cat.* No. 12, *Nest and Eggs Austr. Bds.* p. 36 (1889); *De Vis, Offic. Rep. Sci. Exp. N. Queensld.* p. 33 (1889); *Sharpe, Brit. Mus. Cat.* Vol. xvii. p. 204 (1892).

Paralcyon gigas, *Cab. & Heine, Mus. Hein Theil* ii. p. 165 (1860).

Gogobera, *Aborigines of New South Wales.*

Kong-ga-ka, *Aborigines of Cairns District, N. Queensland.*

Adult male. Forehead brown, extending in a blackish-brown stripe down the centre of the head reaching to the nape; lores, a narrow ring round the eye, a broad band extending below the eye, and the whole of ear-coverts blackish-brown; nape spot blackish-brown sometimes almost extending round to the ear-coverts; sides of the head from above the eyes and extending round the back of the head white, freckled here and there with brown; the whole of the hindneck, throat, chest and the remainder of the under surface white, with irregular narrow brown crossbars on the concealed portions of the feathers, these crossbars showing on the sides of the body and flanks silky white, with well defined irregular and slightly broader crossbars of dark brown; under wing-coverts and axillaries white, strongly barred with brown, inner series of the under primary-coverts blackish-brown, the outer marginal series edged with white; under tail-coverts with narrow brown bars on concealed portions; primaries dark brown, white at the base, the white forming a blotch on the outer webs of the second to sixth quill, all the quills dark brown tinged with bluish-green on the outer webs except at the tips, and more or less broadly margined on their inner webs towards the base with white; the white extending in a narrow line round the tips of the secondaries; interscapular region, and shoulders brown, median wing-coverts dark brown largely tipped with light silvery-blue, outer series and primary-coverts blackish-brown; feathers of the back almost white with narrow crossbars of brown, the tips white; concealed parts of the rump and median upper tail-coverts dark brown, tips of the feathers light silvery-blue, a more or less distinct spot of white on the webs on the median portion of the feathers; outer and terminal series of the upper tail-coverts barred alternately with rufous and black—two centre tail feathers similarly barred, the tips white, all the other feathers similarly barred the rufous

decreasing, and the white increasing in extent until it occupies nearly the whole of the outermost surface on either side, on two the rufous almost altogether disappearing—the black bars becoming narrow zigzag lines on the tips; under tail-coverts white, under surface of tail white with broad bars of black across the basal half and narrow zigzag lines towards the tips, the rufous showing through on the basal portions where the black bands are broadest. Bill black, lower mandible yellowish-white; iris dark rich brown, legs and feet yellowish.

Female. Similar in plumage to the male, but having less of the silvery-blue tint on the wings and rump, the lower portion of the rump and upper tail-coverts of a deeper rufous with black bars.

Remarks. The young have the frontal feathers barred, and frequently have a tinge of rufous on the ear-coverts and front of the head, but this also occurs in very old females. The feathers on the whole of the under surface of the body are crossed with narrow wavy lines of blackish-brown.

Hab. Rockingham Bay, Wide Bay District, Dawson River, Richmond and Clarence Rivers District, New South Wales, Interior, Victoria, and South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid toe (s.v.)	Hind toe (s.v.)
A 1 ♀	16	8.8	6	2.85	2.2	3.5	1.05	1.05	1	1.45	0.65
A 2 ♂	16.8	8.4	6.5	2.7	2.1	3	0.9	0.9	0.9	1.5	0.6
A 3 ♀	17	8.8	6.8	2.8	2.1	3.35	1.05	1.05	0.95	1.4	0.6
A 4 ♀	17	9	6.5	3	2.45	3.6	1	0.9	1	1.5	0.6
A 5 ♀	17	9.2	6.8	2.75	2.1	3.35	1.1	1.08	1.1	1.45	0.7
A 6 ♂	17	8.4	6.8	2.7	2	3.2	1	1	1	1.35	0.6
A 7 ♀	16.5	8.3	6.9	2.75	2.25	3.25	1.1	1.03	1	1.4	0.6
B 1 ♂	16.5	8.7	6.3	2.6	2	3.1	1	1	0.9	1.4	0.5

A 1 ♀ ad. sk., Dubbo, New South Wales, July, 1876.

Pres.

A 2 ♂ ad. sk., Wide Bay, Queensland, 1867.

Col.

A 3 ♀ ad. sk., Clyde River, New South Wales, 27th Aug., 1864.

Col.

A 4 ♀ ad. sk., Hay, New South Wales, 1883.

Col.

A 5 ♀ ad. sk., St. Leonards, New South Wales, May, 1867.

Col.

A 6 ♂ ad. sk., Cairns, Northern Queensland, 1889.

Col.

A 7 ♀ ad. sk., Cairns, Northern Queensland, 1889.

Col.

B 1 ♂ not quite ad. sk., Narrabeen Lagoon, N. S. W., June, 1876.

Col.

2. *Dacelo leachii*.*Leach's Kingfisher.*

Dacelo leachii, *Fig. & Horsf. in Linn. Trans.* Vol. xv. p. 205 (*ex. Lath., MSS.* 1827); *Gray, Gen. Bds.* Vol. i. p. 78 (1846); *Gould, in Stokes Voy. Beagle*, Vol. i. App. p. 479 (1846); *id. Bds. Austr. fol.* Vol. ii. pl. 19 (1848); *id. Introd. Bds. Austr.* p. 29 (1848); *Gray, Cat. Fiss. Brit. Mus.* p. 51 (1848); *Bonap., Consp. Av. tom. i.* p. 154 (1850); *Reichb., Vög. Neuhol.* p. 210 (1850); *id. Handb. Alced.* p. 41, t. ccccxvi. fig. 3159-60 (1851); *Macgill., Voy. Rattl.* Vol. ii. p. 356 (1852); *Gray, Proc. Zool. Soc.* 1858, p. 189; *Schl., Mus. Pay-bas. Alced.* p. 20 (1863); *Ramsay, Ibis* 1865, p. 84; *Gould, Handb. Bds. Austr.* Vol. i. p. 124, sp. 61 (1865); *Diggles, Orn. Austr.* pl. 24 (1870); *Gray, Hand-l. Bds.* p. 89 (1869); *Sharpe, Mon. Alced.* p. 289, pl. 113 (1868-71); *Castl. & Rams., Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 379; *Sharpe, Rep. Voy. Alert*, p. 23 (1884); *Ramsay, Tab. List Austr. Bds.* p. 3 (1888); *Broadb., Proc. Roy. Soc. Queensld.* Vol. v. 1888, p. 17; *De Vis, Off. Rep. Sci. Exp. N. Queensld.* p. 32 (1889); *North, Austr. Mus. Cat. No. 12, Nest and Eggs Austr. Bds.* p. 36 (1889); *Sharpe, Brit. Mus. Cat.* Vol. xvii. p. 206 (1892).

Adult male. The whole of the head, ear-coverts and nape streaked with brown and white, the white occupying the median portion of the feathers, the apical portion with a narrow shaft line widening into a broad tip of brown, feathers elongated lanceolate; collar, hindneck, side of the neck, throat and all the under surface white, crossed with a wavy zigzag or sagittal line of brown, the under wing-coverts, flanks and under tail-coverts with slightly broader bars; shoulders, lesser wing-coverts above, and interscapular region dark brown, whitish towards the base, scapulars dark brown, with a narrow line of silvery-white round the tips, white mesially towards the base; median wing-coverts, lower part of the back, rump and upper tail-coverts rich silvery verditer-blue; outer series of the tail-coverts black tinged with bluish-green, two central tail feathers and the outer webs of all except the outermost one on either side—which are mottled with white—deep blue, inner webs of the outer two on either side blackish-brown with large blotches and the remains of seven to eight bands of white, tips white; the remaining feathers largely blotched towards the end and tipped with white, the centre pair margined at the tip with a narrow line of white only. Outer webs of the primary-coverts and of all the quills deep blue, the second to sixth quill white at the base, their outer webs freckled with blue, all the quills white on their inner webs, mesially black towards the tips; the secondaries margined with white at the tips.

Adult female. Similar to the adult male but with less extent of blue on the wing; the outer series of the upper tail coverts rich rufous banded with black, the tail feathers with deep steel-blue bands on both webs of centre pair, and on the outer webs of the remaining feathers, bands on the inner webs black, all tipped more or less with white, more largely on the outer feathers.

Hab. Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid toe.	Mid toe.
A 1 ♂	16.5	8.5	6	3.25	2.6	3.9	1.1	1.1	1	1.6	0.7
A 2 ♀	17.2	8.5	6	3.5	2.9	4.2	1.15	1.2	1	1.6	0.7
A 3 ♂	16	7.9	5.9	3.15	2.6	3.7	1.08	1.1	1	1.4	0.65

A 1 ♂ ad. sk., Brisbane River, Queensland, April, 1865. Col.
 A 2 ♀ ad. sk., Brisbane River, Queensland, 29th Sept., 1864. Col.
 A 3 ♂ ad. sk., Cairns, Northern Queensland, August, 1889. Col.

3. *Dacelo cervina*.

Fawn-breasted Kingfisher.

Dacelo cervina, Gould, *Bds. Austr.* Vol. ii. pl. 20 (1846); *id.* in Stokes Voy. *Beagle*, Vol. i. (1846); Gray, *Gen. Bds.* Vol. i. p. 78 (1846); *id.* *Cat. Fiss. Brit. Mus.* p. 51 (1848); Leichhardt, *Overl. Exp.* pp. 326, 461 (1847); Bonap., *Consp. Av.* tom. i. p. 154 (1850); Reichb., *Vög. Neuhol.* p. 38 (1850); *id.* *Handb. Alced.* p. 40, t. cccxxviii. figs 3164-65 (1851); Cass., *Cat. Halcy. Phil. Mus.* p. 16 (1852); Gray, *Proc. Zool. Soc.* 1858, p. 189; Schl., *Mus. Pay-bas. Alced.* p. 19 (1863); Gould, *Handb. Bds. Austr.* p. 125, sp. 62 (1865); Gray, *Hand-l. Bds.* p. 89 (1869); Sharpe, *Mon. Alced.* p. 291, pl. 114 (1868-71); Masters, *Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 47, sp. 13; Ramsay, Vol. ii 1877, p. 179, sp. 62; Masters, *l.c.*, p. 270, sp. 13; Forbes, *Ibis*, 1881, p. 8; Ramsay, Vol. i. 2nd Series, 1886, p. 1086 sp. 5; *id.* *Tab. List Austr. Bds.* p. 3 (1888); North, *Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Series, 1889, p. 1024; Sharpe, *Brit. Mus. Cat.* Vol. xvii. p. 207 (1892) (subsp.).
Dacelo cervinus, Salvad., *Ann. Mus. Civ. Gen.* Vol. ix. (xxix.) p. 20, 1890.

Dacelo cervicalis, Kaup., *Fam. Eiv.* p. 8 (1848).

Paraleyon cervina, Cab. & Heine, *Mus. Hein. Theil* ii. p. 164 (1860).

Dacelo salusii, *Homb. et Jacq. Voy. au Pôle Sud.* iii. p. 100, pl. 23 (1853).

Dacelo occidentalis, *Gould, Proc. Zool. Soc.* 1869, p. 602; *Sharpe, Mon. Alced.* p. 293, pl. 115 (1870); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. iii. 1878, p. 179; *Sharpe, Rep. Voy. Alert*, p. 23 (1884).

Lā-rool, *Aborigines of Port Essington*, (Gould).

This is a smaller race of *D. leachii* of Eastern Australia. Specimens from Roeburne, North-west Australia, are similar in plumage to the North Queensland birds, but are slightly larger and have more white on the head and nape feathers from the blackish-brown shaft lines being very much narrower; the centre of the back and sides of the rump also white, the feathers of the latter parts being slightly tipped with blue; the outer series of upper tail-coverts in one specimen (♂) are largely tipped with white; the chin and upper part of the throat white without the narrow wavy lines; the collar, sides of the neck, breast, under tail-coverts, and rest of the body washed with buff. These I take to be a pair of very old birds.

The specimens from Cape York are all more or less tinged with buff on the under surface, sides of the head and neck, but are smaller, while those from Port Essington and Port Darwin are smaller still.

Immature birds of all the varieties of *D. leachii* and *D. cervina* have well defined wavy lines of dark brown on the under surface, with age the striations of the head become narrower, and the throat finally white.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Length of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid toe.	Hind toe.
A 1 ♂	18	8	6.2	3.3	2.2	3.8	1.05	1.05	1.15	1.65	0.75
A 2 ♀	17.5	7.8	5.5	3.35	2.6	3.6	1	1.05	1.1	1.6	0.65
A 3 ♀	14.5	7.6	5.5	3.2	2.6	3.65	1	1.05	1.1	1.6	0.7
A 4 ♂	15.5	7.6	5.5	3.1	2.5	3.72	1.05	1.05	1.1	1.5	0.7
A 5 ♂	15	7.5	5.3	2.8	2.3	3.45	1	1.05	1.1	1.5	0.65

A 1 ♂ ad. sk., Roeburne, N.W. Australia, 24th April, 1889.

A 2 ♀ ad. sk., Roeburne, N.W. Australia, 24th April, 1889.

A 3 ♀ ad. sk., Derby N.W. Australia, 1886.

A 4 ♂ ad. sk., Cape York.

A 5 ♂ ad. sk., Port Essington.

Pch.

Pch.

Col.

Pch.

Col.

2. HALCYON.

1. *Halcyon sanctus*.*Sacred Kingfisher.*

Sacred Kingfisher, *Phillip, Voy. Bot. Bay*, 2nd Edit. pl. opp. p. 156 (1790); *White, Journ. Voy. N.S.W.* pl. opp. p. 193 (1790).

Alcedo sacra, var. *Shaw, Gen. Zool.* viii. p. 79 (1811).

Halcyon sacra, *Steph., (nec Gmel.) Gen. Zool.* Vol. xiii. p. 98 (1826); *Jard. & Selb., Ill. of Orn.* ii. pl. 96; *Vigors, in King's Surv. Intertrop. Austr.* Vol. ii. p. 416 (1827).

Halcyon collaris, (err.) *Vig. & Horsf., Trans. Linn. Soc.* Vol. xv. p. 206 (1826); *Gould, Syn. Bds. Austr.* pt. iii. (1838).

Halcyon sanctus, *Vig. & Horsf., Trans. Linn. Soc.* Vol. xv. p. 206 (1826); *Gould, in Eyre's Disc. Centr. Austr.* Vol. i. app. p. 441 (1845); *G. R. Gray, Gen. Bds.* Vol. i. p. 79, sp. 31 (1846); *Gould, Bds. Austr. fol.* Vol. ii. pl. 21 (1848) *id. Introd. Bds. Austr.* p. 30 (1848); *G. R. Gray, Cat. Fiss. Bds. Brit. Mus.* p. 56 (1848); *Reichb., Vög. Neuhol.* p. 33 (1850); *Elsey, Proc. Zool. Soc.* 1857, p. 25; *G. R. Gray, Proc. Zool. Soc.* 1858, pp. 172, 190; *id. Cat. Bds. New Guin.* pp. 20, 55 (1859); *id. Cat. Bds. Trop. Isl.* p. 6 (1859); *Wall., Proc. Zool. Soc.* 1863, p. 484; *Finsch., & Hartl., Proc. Zool. Soc.* 1868, pp. 116, 118; *Sclat., Proc. Zool. Soc.* 1869, p. 119; *Diggles, Orn. Austr.* pt. 2 (1869); *Sharpe, Mon. Alced.* pl. 91 (1868-71); *Hartl., Proc. Zool. Soc.* 1872, p. 89; *Sclat., Proc. Zool. Soc.* 1877, p. 105; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. 1877, p. 179, sp. 64; *Finsch, Proc. Zool. Soc.* 1879, p. 40; *Sharpe, Journ. Proc. Linn. Soc.* Vol. xiv. p. 686 (1879); *id. Rep. Voy. Alert*, p. 24, No. 49 (1884); *Broadb., Proc. Roy. Soc. Queensld.* Vol. ii. 1885; *Legge, Proc. Roy. Soc. Tas.* 1886, p. 238; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. i. 2nd Series, 1886, p. 1086; *id. Tab. List Austr. Bds.* p. 3, sp. 71 (1888); *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, 1888, p. 1774; *De Vis, Off. Rep. Sci. Exp. N. Queensld.* p. 32 (1889); *Coax & Ham., Proc. Linn. Soc. N.S.W.* Vol. iv. 2nd Series, 1889, p. 401; *North, Aus. Mus. Cat.* No. 12, *Nests and Eggs Austr. Bds.* p. 37 (1889); *Sharpe, Brit. Mus. Cat.* Vol. xvii. pp. 267, 500 (1892).

Dacelo chlorocephala, var. *B., Less., Traité d' Orn.*, p. 246 (1831).

Todirhamphus sanctus, *Bonap., Consp. Av.* tom. i. p. 156 (1850); *Reichb., Handbk. Alced.* p. 33, sp. 80 (1851); *Bonap, Consp. Vol. Anis.* p. 9, sp. 300 (1854); *Cass., Unit. Stat. Expl. Exp.* p. 214 (1858); *Wall, Proc. Zool. Soc.* 1862, p. 338; *Gould, Handbk. Bds. Aust.* Vol. i. p. 128 (1865); *Ramsay, Ibis* 1866, p. 327; *id. Proc. Zool. Soc.*

- 1875, p. 582, sp. 40; *Masters, Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 47, No. 14.
- Todirhamphus australasie*, *Cass., (nec Vieill.) Cat. Halc. Phil. Mus.* p. 12 (1852).
- Sauropatis sancta*, *Cab. et Hein., Mus. Hein.* ii. p. 158 (1860); *G. R. Gray, Hand-l. Bds.* Vol. i. p. 27, sp. 1112 (1869); *Wald., Trans. Zool. Soc.* Vol. viii. p. 44 (1872); *Salvad., Cat. Ucc. di Born.* p. 104 (1874); *id. Ann. Mus. Civ. Gen.* ix. p. 19 (1876); *id. Proc. Zool. Soc.* 1874, p. 94; *id. Ann. Mus. Civ. Gen.* xiv. p. 52 (1879); *id. Orn. Pap. et Molucc.* Vol. i. p. 476, sp. 222 (1880); *id. Voy. Chall.* p. 76 (1881); *Forbes, Proc. Zool. Soc.* 1884, pp. 426, 432; *Meyer, Zeitschr. f. ges. Orn.* i., p. 276 (1884); *Guillem., Proc. Zool. Soc.* 1885, p. 568; *Salvad., Agglin. Orn. Pap. et Molucc.* i., p. 58 (1889); *id. Mem. R. Acc. Sci. Tor.* (2) xl. p. 186 (1889).
- Dacelo sancta*, *Schleg., Mus. Pay-bas. Alced.* p. 35 (1863); *Finsch., Neu-Guin.* p. 161 (1865); *Schleg., Mus. Pay-bas. Alced. Revue*, p. 26 (1874).
- Kun-ye-nuk, Aborigines of Western Australia*, (Gould)

Adult male Head, interscapular region, and scapulars dull bluish-green, a spot in front of the nostrils and a narrow line over the eye, light buff; from the rictus, below the eye, extending over the whole of the ear-coverts and round the nape, black tinged laterally with bluish-green; along the sides of the head and nape washed with dull cobalt-blue; nape spot white, almost concealed; the throat and collar round the neck white, the latter occasionally tinged with buff, and in not quite adult birds sometimes freckled with black; wing-coverts and outer webs of all the quills except that of the first primary, blue, the inner webs blackish with a narrow line of buffy-white towards the base; back, rump, and upper tail-coverts bright blue; under surface of the wings and tail feathers blackish-brown; chest, all the under surface of the body, under wing- and tail-coverts buff, lightest on the abdomen, slightly darker on the under wing-coverts and flanks. Bill black, the basal portion of the lower mandible white; legs dark brown, feet blackish-brown, iris brownish-black. Total length 7·7 inches, wing 3·8, tail 2·6, tarsus 0·46.

Adult female. In plumage similar to the male, but slightly duller in colour.

Young. The young have the front of the head mottled or striated with buff, and the upper coverts of the wings margined with white or fluffy-white; feathers of the chest with a short median shaft stripe and margined with blackish-brown; under wing-coverts sides and flanks washed with buff, collar round the hind neck white; length 7 inches, wing 3·5, tail 2·3, tarsus 0·45.

Remarks. In some specimens the white collar round the neck is very much wider than in others, and the black line which

separates it from the nape, washed with bluish-green like the head, the white nape patch is occasionally visible, but is usually on the concealed portion of the feathers; feathers on legs dark brown in some specimens.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers Districts, New South Wales, Interior, Victoria and South Australia, Tasmania, West and S.W. Australia, Tasmania. (*Ramsay*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus.	Mid Toe (s. v.)	Hind toe (s. v.)
A 1 ♂	7.8	3.65	2.7	1.72	1.35	1.95	0.5	0.5	0.5	0.68	0.35
A 2 ♂	7.6	3.7	2.65	1.8	1.43	1.97	0.48	0.48	0.48	0.63	0.33
A 3 ♂	7.7	3.6	2.45	1.67	1.3	1.85	0.45	0.46	0.52	0.6	0.35
A 4 ♀	8.2	3.9	2.5	1.9	1.47	2.01	0.5	0.5	0.52	0.65	0.3
A 5 ♀	8	3.95	2.65	1.75	1.35	1.92	0.45	0.5	0.5	0.63	0.33
A 6 ♀	7.5	3.6	2.63	1.68	1.33	1.9	0.4	0.45	0.5	0.65	0.33

A 1 ♂	ad. sk., Homebush, Sydney, New South Wales, Nov., 1874.	Pres.
A 2 ♂	ad. sk., Derby, North-western Australia, 1886.	Pch.
A 3 ♂	ad. sk., Liverpool, New South Wales, 1876.	Pres.
A 4 ♀	not quite ad. sk., King George's Sound, W. A., April, 1866.	Col.
A 5 ♀	not quite ad. sk., Parramatta, N. S. Wales, Nov., 1883.	Pres.
A 6 ♀	not quite ad. sk., Rockingham Bay, Queensland.	Pch.

2. *Halcyon pyrrhopygia*.

Red-backed Kingfisher.

Halcyon pyrrhopygia, Gould, *Proc. Zool. Soc.*, 1840, p. 113; *id. in Eyre's Disc. Cent. Austr.* Vol. i. App. p. 441 (1846); Gray, *Gen. Bds.* Vol. i. p. 79 (1846); Gould, *Bds. Austr.* fol. Vol. ii. pl. 22 (1848); *id. Intr. Bds. Austr.* p. 30 (1848); Gray, *Cat. Fiss. Brit. Mus.* p. 57 (1848); Sturt, *Exp. Cent. Austr.* Vol. ii. App. p. 20 no 21 (1849); Reichb. *Vög. Neuhol.* p. 277 (1850); Gray, *Hand-l. of Bds.* Vol. i. p. 92 (1869); Sharpe, *Mon. Alced.* p. 211, pl. 79 (1868-71); Castl. & Ramsay, *Proc. Linn. Soc. N.S.W.* Vol. i. 1876. p. 380, No. 10; Ramsay, *Proc. Linn. Soc. N.S.W.* Vol. i. 2nd Series, 1886, p. 1086, sp. 7; *id. Tab. List Austr. Bds.* p. 3, sp. 73 (1888); Broadb., *Proc. Roy. Soc. Queensland.* Vol. v. 1888, p. 17; North, *Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, 1888, p. 1774; *id. Austr. Mus. Cat. Nest and Eggs Austr. Bds.* p. 38 (1889).

Todiramphus pyrrhopygius, *Bonap., Consp. Gen. Av.* i. p. 157 (1850); *Reichb., Handbk. Alced.* i. p. 33 (1850); *Cass., Cat. Halc. Phil. Mus.* p. 4 (1852); *id. U.S. Expl. Exp.* p. 218 (1858); *Gould, Handbk. Bds. Austr.* Vol. i. p. 130, sp. 64 (1865); *Ramsay, Proc. Zool. Soc.* 1875, p. 582; *Masters, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 270, sp. 15.

Cyanalecyon pyrrhopygia, *Bonap., Conspect. Vol. Anis.* p. 9 (1854).

Sauropatis pyrrhopygia, *Cab. & Heine, Mus. Hein. Theil*, ii. p. 161 (1860).

Dacelo pyrrhopygia, *Schl., Mus. Pay-bas Alced.* p. 39 (1863).

Halcyon pyrrhopygius, *Sharpe, Brit. Mus. Cat.* Vol. xvii. p. 258 (1892).

Adult male. Head, interscapular region and scapulars green, narrowly margined with white; nape feathers white, tipped with green, the whole head having a striated appearance, with more white showing over the eyes and ear-coverts; ear-coverts and a narrow collar round the hind neck black, tinged with bluish-green near the orbits, wing-coverts and the upper surface of the wings blue on the outer webs of all the quills, blackish on their median portion; the inner webs margined with white; secondaries margined with white at the tips of the outer webs also; under wing-coverts white, the quills brown broadly margined with white on the inner webs, a blackish mark down the side of the body under the wings to the flanks; axillaries, and a few adjacent feathers of the sides tinged with greenish-blue; throat, all the under surface of the body and a broad collar round the neck white; back, rump and upper tail-coverts rufous, outermost series of the upper tail-coverts and the tail above bluish-green; outer tail feathers on either side margined with white, all round the other feathers except the centre pair, more or less margined with white on their inner webs; tail below dark brown, margined as on the upper surface with white, under tail-coverts white or occasionally tinged with buff. Bill, upper mandible and tip of lower, black, basal half of lower mandible except on the edges yellowish-white, irides dark brown, legs and feet dark brown. Total length 8·6 inches, wing 4·2, tail 2·9, tarsus 0·5, mid-toe 0·7, bill from forehead 1·8, from nostril 1·45, from gape 2·1, height at nostril 0·5 breadth 0·5. The sexes are alike in plumage.

Young. The young have the head striated with brown and white, and a white line extending from the lores over the eye to the end of the black ear-coverts, the broad white collar is tinged with buff, the upper and under wing-coverts and margins of the wing, the sides and flanks washed with chestnut-buff; there is also a bluish-grey shade on the quills and tail; under tail-coverts buff; a band of feathers across the chest very narrowly margined on the tips with dark brown; bill blackish horn-colour, extreme

tip white. Total length 7 inches, wing 3·8, tail 2·6, bill 1·3, tarsus 0·45.

Remarks. In some bleached specimens from Queensland the green of the head has become almost dull brown, they show also more white on the nape, the ear-coverts and a narrow line round the hind neck, jet black.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, New South Wales, Interior, Victoria and South Australia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril	Breadth of bill at nostril.	Tarsus	Mid toe (s. v.)	Hind toe (s. v.)
A 1 ♀	8·5	4·1	2·9	1·7	1·32	2·05	0·44	0·47	0·55	0·7	0·35
A 2 ♂	8·6	4·2	3·1	1·8	1·5	2·15	0·45	0·48	0·52	0·7	0·35
A 3 ♀	8·5	4·1	3	1·75	1·35	2·1	0·48	0·48	0·5	0·7	0·35
A 4 ♀	8·2	4·2	3	1·9	1·55	2·25	0·45	0·48	0·55	0·7	0·35
A 5 ♂	8	4·1	2·85	1·9	1·55	2·2	0·45	0·47	0·53	0·7	0·33

A 1 ♀ ad. sk., South Australia, 1864.

A 2 ♂ ad. sk., Rockingham Bay.

A 3 ♀ ad. sk., Bourke, Interior of New South Wales, 1888.

A 4 ♀ ad. sk., Derby, North-western Australia, 1886.

A 5 ♂ ad. sk., Derby, North-western Australia.

Col.

Pch.

Col.

Col.

Col.

3. Halcyon sordidus.

Sordid Kingfisher, Mangrove Kingfisher, &c.

Halcyon sordidus, Gould, *Proc. Zool. Soc.* 1842, p. 72; Gray, *Gen. Bds.* Vol. i. p. 79 (1846); Gould, *Bds. Austr.* fol. Vol. ii. pl. 23 (1848); *id. Intr. Bds. Austr.* p. 30 (1848); Reichb., *Voy. Neuholl.* p. 239 (1850); Gray, *Hand-l. Bds.* Vol. i. p. 92 (1869); Ramsay, *Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 179, sp. 66; *id. Tab. List Austr. Bds.* p. 3, sp. 73 (1888); Broadb., *Proc. Roy. Soc. Queensld.* Vol. v. p. 17 (1888); Sharpe, *Voy. Alert*, p. 24, No. 51 (1884); *id. Brit. Mus. Cat.* Vol. xvii. p. 278 (1892); North, *Proc. Linn. Soc. N.S.W.* 2nd Series, Vol. vii. 1892, p. 395.

Todiramphus sordidus, Bonap., *Consp. Gen. Av.* tom. i. p. 157 (1850); Reichb., *Handb. Alced.* p. 32. (1851); Cass., *Cat. Halc. Phil. Mus.* p. 12 (1852); Bonap., *Consp. Vol. Anis.* p. 9 (1854); Cass., *U.S. Expl. Exp.*, p. 212 (1858); Gould, *Handbk. Bds. Austr.* Vol. i., p. 132, sp. 65 (1865); Rams., *Proc. Zool. Soc.* 1875, p. 582, No. 42; Masters,

Proc. Linn. Soc. N.S.W. Vol. i. 1876, p. 47, sp. 15; *id. op. cit.* Vol. ii. 1877, p. 270, sp. 14.

Halcyon sordida, *Macgill.*, *Voy. Rattles.*, Vol. ii. App. 356 (1852); *Sharpe, Mon. Alced.* p. 233, (1868-1871).

Sauropatis sordida, *Cab. & Hein.*, *Mus. Hein. Theil* ii. p. 59 (1860).

Sauropatis grayi, *Cab. & Hein.*, *Mus. Hein. Theil* ii. p. 59 (1860)

Halcyon grayi, *Gray, Hand-l. Bds.* Vol. i. p. 92, (1869).

Tchoon-gun-gun, *Aborigines of Hinchinbrook Island* (North).

Adult male. An oblong loreal spot of white from the nostril to the eye; forehead dull olive-brown, becoming oil green on the head and nape; interscapular region, upper wing-coverts and back dull green; rump and upper tail-coverts greenish-blue; quills and primary-coverts black, the outer webs rich blue; the scapulars and outer webs of the secondaries tinged with greenish-blue; tail deep blue above, the margins of the inner webs and the under surface of the feathers black; under surface of the wings black, the under coverts white; ear-coverts and the narrow band round the nape black; an indistinct nape spot of white; the throat, a collar round the neck, and the whole of the under surface of the body, and the under tail-coverts white; feathers on knee-joint brown; axillaries white, freckled or streaked with black; occasionally remains of blackish bars on the sides of the neck and across the chest. Bill black, base of lower mandible white; legs and feet dark brown. Total length 9 inches, wing 4.1, tail 2.7, tarsus 0.65, mid-toe 0.85, bill from forehead 1.9, from nostril 1.5, from gape 2 in., height at nostril 0.5, breadth 0.6.

Adult female. Similar to the male in plumage.

Remarks. A fully adult specimen from the Northern Territory has the head, interscapular region and scapulars dark blackish-brown without any shade of green.

Hab. Port Darwin and Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. v.)	Hind Toe (s. v.)
A 1 ♂	9.4	4.1	3.25	2.2	1.85	2.5	0.55	0.57	0.55	0.85	0.4
A 2 ♂	9.1	4	3.2	0.05	1.65	2.35	0.55	0.6	0.6	0.8	0.35
A 3 ♂	9.4	4.1	3	1.95	1.55	2.2	0.55	0.6	0.62	0.82	0.4
A 4 ♀	8.5	4	3	2.2	1.85	2.47	0.55	0.55	0.58	0.8	0.38
A 5 ♂	9.2	4.1	3.15	2.2	1.82	2.37	0.55	0.57	0.6	0.8	0.4

A 1 ♂ ad. sk., Brisbane River, Queensland.	Pch.
A 2 ♂ not quite ad. sk., Brisbane River, Queensland.	Pch.
A 3 ♂ not quite ad. sk., Moreton Bay, Queensland.	Col.
A 4 ♀ ad. sk., Northern Australia, 1870.	Pch.
A 5 ♂ ad. sk., Wide Bay, Queensland.	Col.

4. *Halcyon macleayi*.*Macleay's Kingfisher.*

Halcyon macleayi, *Jard. & Selb., Ill. Orn.* pl. 101 (1825-39); *G. R. Gray, Gen. Bds.* Vol. i. p. 79 No. 34 (1846); *Gould, in Stokes, Voy. Beagle*, Vol. i. App. p. 479 (1846); *Gould, Bds. Austr. fol.* Vol. ii. pl. 24 (1848); *id. Intr. Bds. Austr.* p. 29 (1848); *G. R. Gray, Cat. Fiss. Bds. Brit. Mus.* p. 58 (1848); *Reichb., Vög. Neuhol.* p. 34 (1850); *Cass., Cat. Halc. Phil. Mus.* p. 6 (1852); *Macgill., Voy. Rattles.* Vol. ii. App. p. 356 (1852); *G. R. Gray, Proc. Zool. Soc.* 1858 p. 190; *Ramsay, Ibis*, 1865, p. 84; *Diggles, Orn. Austr.* pt. 2 (1868); *Sharpe, Mon. Alced.* p. 207, pl. 78 (1868-71); *Castl. & Rams., Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 380; *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. (1877) p. 67; *Sharpe, Rep. Voy. Alert*, p. 24, No. 50 (1884); *Broadb., Proc. Roy. Soc. Queensld.* Vol. ii. 1885, p. 120; *id.* Vol. v. (1888) p. 17; *Ramsay, Proc. Linn. Soc.* Vol. ii. 2nd Series (1887) p. 24; *id. Tab. List Austr. Bds.* p. 3, sp. 74 (1888); *De Vis, Rep. Sci. Exp. N. Queensld.* p. 32 (1889); *Sharpe, Brit. Mus. Cat.*, Vol. viii. p. 254 (1892).

Todiramphus macleayi, *Bonap., Consp. Gen. Av.* tom. i., p. 157 (1850); *Reichb., Handb. Alced.* p. 29.

Halcyon incinctus, *Gould, Proc. Zool. Soc.* 1837, p. 142.

Cyanalcyon macleayi, *Bonap., Consp. Vol. Anis.* p. 9 (1854); *Cab. & Heine, Mus. Hein. Th.* ii. p. 158 (1860); *Gould, Handbk. Bds. Austr.* Vol. i. p. 133, sp. 66 (1865); *Ramsay, Proc. Zool. Soc.* 1875; *Masters, Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 47, sp. 16; *id.* Vol. ii. 1877, p. 270; *D'Alb. Ann. Mus. Civ. Gen.* x. p. 19 (1877); *Salvad., Orn. Pap. et Molucc.* Vol. i. p. 465 (1880); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ix. (1885) p. 864; *Salvad., Aggijn. Orn. Pap. et Molucc.* p. 57 (1889).

Dacelo macleayi, *Schl., Mus. Pay-bas., Alced.* p. 41 (1863); *Finsch., New Guin.* p. 161 (1865); *Schl., Mus. Pay-bas., Alced. Revue*, p. 30 (1874).

Halcyon jacquiniti, *Hartl., & Finch, Faun. Central Polyn.* p. 269 (1867).

Halcyon sancta, *Diggles, Orn. of Austr.* (pl. only) 1868.

Dacelo lazulina, *Giebel, Thes. Orn.* ii. p. 6 (1874).

Adult male. Lores, nuchal spot, a broad collar round the neck and all the under surface, (except the flanks) under wing- and tail-coverts white; the flanks and occasionally the sides of the body washed with orange-buff; head, wings and tail deep ultramarine, a line below the eye and the ear-coverts almost black; quills black, the outer webs blue, the inner webs white, a large spot of white on both webs from the fifth to tenth primary; wing-coverts bright blue; scapulars, rump, and back light cobalt-blue, the former slightly tinged with green; upper tail-coverts cobalt, the outer series deep blue like the tail; tail below and the concealed portions of all the feathers except the centre pair blackish.

Adult female. The female differs in plumage only in having the whole of the hindneck deep blue, being destitute of the white collar.

Young. The young have a tinge of buff on the lores and under surface of the body.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York, Rockingham Bay, Port Denison, Wide Bay District, Dawson River, Richmond and Clarence Rivers District, New South Wales. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. v.)	Hind Toe (s. v.)
A 1 ♂	7.5	3.5	2.5	1.63	1.28	1.8	0.43	0.42	0.5	0.7	0.33
A 2 ♂	7	3.5	2.5	1.65	1.3	1.85	0.42	0.47	0.5	0.62	0.3
A 3 ♂	7.4	3.6	2.48	1.68	1.32	1.9	0.42	0.5	0.5	0.65	0.35
A 4 ♀	7.8	3.7	2.55	1.75	1.45	2	0.48	0.5	0.52	0.72	0.35
A 5 ♀	7.3	3.6	2.6	1.62	1.25	1.88	0.42	0.42	0.48	0.62	0.32
A 6 ♀	7.6	3.8	2.7	1.73	1.35	2	0.45	0.47	0.53	0.65	0.37
A 7 ♂	7.5	3.6	2.5	1.65	1.34	1.85	0.43	0.43	0.5	0.62	0.33
A 8 ♀	7.5	3.8	2.7	1.75	1.4	1.95	0.45	0.43	0.52	0.68	0.33

A 1 ♂ ad. sk.,	Wide Bay, Queensland, September 1867.	Col.
A 2 ♂ ad. sk.,	Cairns, Northern Queensland, 1888.	Col.
A 3 ♂ ad. sk.,	Richmond River, N. S. Wales, April 1888.	Pres.
A 4 ♀ ad. sk.,	Richmond River, N. S. Wales, 1889.	Pch.
A 5 ♀ ad. sk.,	Cairns, Northern Queensland, 1888.	Col.
A 6 ♀ ad. sk.,	Rockingham Bay, Queensland.	Pch.
A 7 ♂ ad. sk.,	Cairns, Northern Queensland, 1888.	Col.
A 8 ♀ ad. sk.,	Cairns, Northern Queensland, 1888.	Col.

3. SYMA.

8. *Syma flavirostris*.*Australian Saw-billed Kingfisher.*

Halcyon (*Syma*?) *flavirostris*, Gould, *Proc. Zool. Soc.* pt. xviii. 1850, p. 200; *id. Contr. to Orn.* 1850, p. 105.

Halcyon flavirostris, Gould, *Bds. Austr.* Suppl. pt. i. pl. 7 (1851).

Halcyon torotoro, (*nec. Less.*) Macgill., *Voy. Rattles.* Vol. ii. App. p. 356 (1852).

Syma flavirostris, Reichb., *Handbk. Alced.* p. 44, sp. 106, t. cccxxx. figs. 3171-72 (1851); Gould, *Handbk. Bds. Austr.* Vol. i. p. 135, sp. 67 (1865); Sharpe, *Mon. Alced.* pl. 56, p. 153 (1868-71); Gray, *Handl. Bds.* i. p. 94, No. 1141 (1869); Masters, *Proc. Linn. Soc. N.S.W.* Vol. i. 1876, p. 47; Ramsay, *Proc. Linn. Soc. N.S.W.* Vol. ii. 1877, p. 179, sp. 68; *id. Tab. List Austr. Bds.* p. 3, sp. 75 (1888); Sharpe, *Brit. Mus. Cat.* Vol. xvii. p. 197 (1892).

Adult male. Head, neck, ear-coverts, and upper part of the interscapular region, orange-rufous; a small spot in front of the eye, an oblong spot on either side of the neck behind the ear-coverts, black; sides of the chest washed with orange-rufous, in some specimens forming an indistinct band across it; throat white; remainder of the under surface white, tinged with orange-buff on the flanks and under tail-coverts; under wing-coverts and the inner webs, except at the tips of all the quills, pale buff; basal quills above dull brown; wing-coverts and interscapular region washed with dull olive-green; back and upper tail-coverts tinged with dull blue; tail above dull bluish-green, the inner margins of all except the centre two feathers dull blackish-brown; under surface of the feathers dark brown. Bill orange, blackish on the culmen near the tip; legs and feet orange, claws black. Total length 7.5 inches, wing 3.05, tail 2.5, tarsus 0.55, mid-toe 0.56.

Female. The female differs from the male in having the crown of the head black, and the oblong mark on the side of the hind neck slightly larger. Total length 7.5 inches, wing 3.1, tail 2.45, tarsus 0.5, mid-toe 0.57, bill from forehead 1.45, from nostril 1.2, height 0.45, breadth 0.45.

Remarks. This species must not be confounded with *S. torotoro* of New Guinea, although very much alike, the New Guinea birds differ in being slightly smaller and in having the whole of the bill orange; and in the female, the whole of the top of the head from the base of the bill to the nape is black; while the female of *S. flavirostris* has the forehead orange-rufous and only the top of the head black.

A specimen of *S. torotoro* from near Port Moresby, New Guinea, measures, total length 7·4 inches, wing 2·95, tail 2·4, tarsus 0·55.

Hab. Port Darwin and Port Essington, Cape York. (*Ramsay.*)

Measurements of average sized specimens.

Sex.	Total length of skin.	Wing.	Tail,	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. v.)	Hind Toe (s. v.)
A 1 ♀	7·5	3·1	2·5	1·52	1·22	1·82	0·45	0·45	0·55	0·57	0·3
A 2 ♀	7·5	3·05	2·42	1·55	1·3	1·9	0·41	0·42	0·53	0·57	0·3

A 1 ♀ ad. sk., Cape York.

Pch.

A 2 ♀ ad. sk., Cape York.

Pch.

4. TANYSIPTERA.

1. Tanysiptera sylvia.

Cinnamon-breasted Kingfisher, White-tailed Kingfisher.

Tanysiptera sylvia, *Gould, Proc. Zool. Soc.* pt. xviii. 1850, p. 200; *id. Bds. Austr.* fol. suppl. pl. 6 (1869); *Reichb., Handb. Alced.* p. 43 t. ccccvii., fig. 3095-96 (1851); *Macgill., Voy. Rattles.* Vol. ii. App. p. 456 (1852); *Gray, Proc. Zool. Soc.* 1858, p. 190, *id. P.Z.S.* 1860, p. 347, *id. P.Z.S.* 1861 p. 433; *Wall, Proc. Zool. Soc.* 1863, p. 24; *Ramsay, Ibis*, 1865, pp. 325-6; *id. P.Z.S.* 1868, p. 383; *Diggles, Orn. Austr.* pl. 27 (1870); *Sharpe, Mon. Alced.* p. 259, pl. 100 (1868-1871); *Ramsay, Proc. Zool. Soc.*, 1875, p. 583; *Broadb., Proc. Roy. Soc. Queensld.* Vol. i. 1884, p. 94; *Ramsay, Tab. List Austr. Bds.* p. 3 (1888); *North, Austr. Mus. Cat.* No. 12, *Nests and Eggs Austr. Bds.* p. 39 (1889-90).

Dacelo sylvia, *Schl., Mus. Pay-bas, Alced.* p. 47 (1863).

Uralcyon sylvia, *Heine, Journ. f. Orn.* 1859, p. 406.

Quatawur, Aborigines of Cape York (Gould).

Adult male. Forehead and crown of the head rich dark blue, brighter and lighter on the sides of the head and nape; ear-coverts and hind neck black; interscapular region black, with an oblong spot of white down the central portion; back, rump, and upper tail-coverts and the centre two tail feathers white, some of the lateral upper coverts black tipped with blue, the remaining tail feathers black, the outer webs above blue; wing-coverts deep blue, scapulars and quills except the first primary, black margined with deep blue, remaining portion of the quills black above and below, the base of the inner webs washed with white, or slightly tinged with buff, the under wing-coverts, axillaries, throat, and the whole

of the under surface of the body, and the under tail-coverts rich cinnamon. Bill, legs, and feet orange-red. Total length 12·9 inches, wing 3·9, tail to end of centre feathers 8 inches, to end of second pair 3 inches; tarsus 0·55, mid. toe 0·6 inch, bill from forehead 1·45, from the nostril 1·1, from gape 1·6.

Female. The female is slightly duller in tint than the male, has the centre feathers of the tail much shorter and their basal half margined with blue. Length of tail (except the centre feathers) 2·8 inch, centre pair of feathers 5·5 to 6 inches.

Young. The young are mottled with black on the under surface which is chiefly buff, or a light cinnamon colour; the white spot on the interscapular region is washed with buff, the upper wing-coverts tipped with buff; back, rump, and upper tail-coverts white, mottled with black, some of the feathers tipped with blue.

Hab. Cape York, Rockingham Bay, Port Denison. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Two central tail feathers	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. v.)
A 1 ♂	12·9	4·03	3·3	8	1·65	1·2	1·8	0·45	0·48	0·6	0·63
A 2 ♂	12·2	4	3·2	7·5	1·5	1·25	1·9	0·42	0·47	0·6	0·62
A 3 ♀	11	4	3·1	6	1·6	1·23	1·86	0·46	0·5	0·58	0·6
A 4 ♂	12·8	3·9	3	7·95	1·5	1·15	1·7	0·44	0·48	0·55	0·58
A 5 ♀	11	3·85	3	5·7	1·5	1·1	1·7	0·45	0·47	0·58	0·62

A 1 ♂ ad. sk., Cairns, North Eastern Queensld. Feb. 28th 1880. Pch.

A 2 ♂ ad. sk., Cairns, North Eastern Queensld. Feb. 28th 1880. Pch.

A 3 ♀ not quite ad. sk., Cairns, North Eastern Queensld. 1887. Col.

A 4 ♂ ad. sk., Cape York, North Australia. Pres.

A 5 ♀ ad. sk., Cape York, North Australia. Pres

5. ALCYONE.

1. *Alcyone azurea.*

Azure Kingfisher.

Azure Kingfisher, Lath. Syn. Suppl. p. 372 (1801).

Alcedo azurea, Lath., Ind. Orn. Suppl. ii. p. 32 (1801);

Swains., Zool. Illust. 1st Ser. pl. 26 (1820); Schl., Mus.

Pay-bas. Alced. (1863).

Ceyx azurea, *Steph., Gen. Zool.* xiii. p. 106 (1826); *Jard. & Selby, Ill. Orn.* ii. pl. 55, fig. 1 (1839).

Alcyone azurea, *Gould, in Eyre's Disc. Cent. Austr.* Vol. i. App. p. 441 (1845); *id. in Stokes Voy. Beagle*, Vol. i. App. p. 479 (1846); *Gray, Gen. Bds.* Vol. i. p. 82 (1846); *Gould, Bds. Austr.* fol. Vol. ii. pl. 25 (1848); *id. Intr. Bds. Austr.* p. 31 (1848); *Gray, Cat. Fiss. Brit. Mus.* p. 65 (1848); *Bonap., Consp. Gen. Av.* tom. i. p. 158 (1850); *Reichb., Vög. Neuhol.* p. 278 (1850); *id. Handb. Alced.* p. 7, (1851); *Cass., Cat. Halc. Phil. Mus.* p. 5 (1852); *Macgill, Voy. Rattlesn.* Vol. ii. App. p. 356 (1852); *Bonap., Consp. Vol. Anis.* p. 10 (1854); *Pelz. Voy. Novara*, p. 58, (1865); *Gould, Handbk. Bds. Austr.* Vol. i. p. 139, sp. 69 (1865); *Sharpe, Proc. Zool. Soc.* p. 355 (1869); *id. Mon. Alced.* p. 41, pl. 13 (1868-71); *Ramsay, Proc. Linn. Soc. N.S.W.* Vol. ii. p. 179, sp. 70 (1877); *Broadb., Proc. Roy. Soc. Queensld.* Vol. v. p. 17 (1888); *Ramsay, Tab. List Austr. Bds.* p. 3, sp. 77 (1888); *North, Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, p. 1774, (1888); *id. Descr. Cat. Nest and Eggs Austr. Bds.* p. 40 (1889); *Sharpe, Brit. Mus. Cat.* Vol. xvii. p. 168 (1892).

Alcedo tribrachys, *Shaw, Nat. Misc.* pl. 281 (1804).

Ceyx tribrachys, *Cuv., Regn. Anim.* i. p. 417 (1817).

Ceyx cyanea, *Less., Traité d'Orn.* p. 241 (1831).

Alcedo australis, *Sicwains., Classif. of Bds.* Vol. ii. p. 336 (1837).

Adult male. Crown and sides of the head, the neck above, and the whole of the upper surface of the body, upper wing- and upper tail-coverts rich azure-blue; tail above blue, black below and on the inner webs; primaries and secondaries black, the outer webs of the latter margined with blue, and narrowly margined with rufous at the base on both surfaces; lores rufous, an oblong spot on the sides of the neck white, occasionally washed with rufous; cheeks, ear-coverts, sides of the neck, and extending on to the sides of the chest, deep blue; throat buff, the chest and all the under surface of the body rich rufous; sides, flanks, and under tail-coverts rufous, washed with rose-lilac; under wing-coverts rich rufous. Bill black; legs and feet orange-red; tuft of oil-gland white, tipped with black. Total length 6·9 to 7 inches, wing 3·05, tail 1·5, tarsus 0·38, mid-toe 0·6, bill from forehead 2, from nostril 1·6, from gape 2·15, width 0·26, height 0·31.

Adult female. Similar to the male in plumage.

Young. In the young and immature birds the head is crossed with wavy markings of blue and black, the lores and neck spot rufous or deep buff, throat buff, the sides of the chest black, all the remainder of the under surface deep rufous without the rosylilac tint on the sides and flanks; legs pale orange, bill black, the tip white.

Hab. Rockingham Bay, Port Denison, Wide Bay District, Richmond and Clarence Rivers Districts, New South Wales, Victoria and South Anstralia. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid toe. (s. u.)	Hind toe. (s. u.)
A 1 ♂	7.2	3	1.75	2.1	1.72	2.4	0.35	0.28	0.4	0.6	0.28
A 2 ♀	6.8	3	1.56	1.8	1.45	2.1	0.35	0.25	0.4	0.55	0.25
A 3 ♀	7.1	3.1	1.75	2	1.65	2.38	0.35	0.3	0.4	0.55	0.27
A 4 ♂	7.3	3	1.6	2.15	1.72	2.4	0.35	0.3	0.42	0.55	0.25
B 1 ♀	6.4	2.95	1.46	1.4	1	1.63	0.28	0.28	0.37	0.5	0.25

- A 1 ♂ ad. sk., Wide Bay, Queensland, November, 1867. Col.
 A 2 ♀ ad. sk., Brisbane River, Queensland, 5th October, 1864. Col.
 A 3 ♀ ad. sk., Middle Harbour, Sydney, N.S. Wales, Sept., 1878. Pch.
 A 4 ♂ ad. sk., Lithgow, N. S. Wales. Exch.
 B 1 ♀ juv. sk., New South Wales. Col.

Alcyone azurea.

Var. diemenensis.

Tasmanian Kingfisher.

Alcyone diemenensis, Gould, *Proc. Zool. Soc.* pt. xiv. p. 19 (1846); *id. Intr. Bds. Austr.* p. 31 (1848); Gray, *Gen. Bds.* Vol. i. p. 82 (1888); Kaup, *Fam. Alced.* p. 18 (1848); Reichb., *Vög. Neuhol.* p. 278 (1850); Cab. et Hein., *Mus. Hein. Theil.* ii. p. 143 (1860); Gould, *Handbk. Bds. Austr.* Vol. i. p. 141 sp. 70 (1865); Sharpe, *Proc. Zool. Soc.* p. 355 (1869); *id. Mon. Alced.* p. 47 (1871); Ramsay, *Proc. Linn. Soc. N.S.W.* Vol. ii. p. 179, sp. 71 (1877); Legge, *Proc. Roy. Soc. Tas.* p. 238 (1886); Ramsay, *Tab. List Austr. Bds.* p. 3, sp. 78 (1888); North, *Austr. Mus. Cat. Nests and Eggs Austr. Bds.* pp. 40-383 (1889).

**Alcyone azurea.***Var. diemenensis.*

The Tasmanian variety, known as *Alcyone diemenensis*, cannot be considered as a distinct species, indeed scarcely as a variety. Bill black, whitish at the extreme tip; legs and feet orange. Total length 7 inches, wing 3.1, tail 1.65, tarsus 0.4, mid-toe 0.55, bill from forehead 2, from nostril 1.5, height 0.4, width 0.3.

Hab. Tasmania.

A 1 ♂ ad. sk., Tasmania.

O.C.

2. Alcyone pulchra.*Resplendent Kingfisher.*

Alcyone pulchra, Gould, *Proc. Zool. Soc.* p. 19, (1846); Gray, *Gen. Bds.* Vol. i. p. 82 (1846); Gould, *Intr. Bds. Austr.* fol. Vol. i. p. 32 (1848); Reichb., *Vög. Neuhol.* p. 278 (1850); *id.* *Handbk. Alced.* p. 7 (1851); Cass., *Cat. Halc. Phil. Mus.* p. 5 (1852); Eisey, *Proc. Zool. Soc.* p. 25 (1857); Gould, *Handb. Bds. Austr.* Vol. i. p. 141, sp. 71 (1865); Sharpe, *Proc. Zool. Soc.* p. 356 (1869); Gray, *Handl. Bds.* p. 96, (1869); Sharpe, *Mon. Alced.* p. 45, pl. 14 (1868-71); Ramsay, *Proc. Linn. Soc. N.S.W.* Vol. ii. p. 179, sp. 72 (1877); Masters, *Proc. Linn. Soc. N.S.W.* Vol. ii. p. 270, sp. 17 (1877); Ramsay, *Proc. Linn. Soc. N.S.W.* Vol. i. 2nd Series p. 1086 (1886); *id.* Vol. iii. 2nd Series, p. 269 (1888); *id.* *Tab. List Austr. Bds.* p. 3 sp. 79 (1888); North, *Proc. Linn. Soc. N.S.W.* Vol. iii. 2nd Series, p. 269, (1888); *id.* *Austr. Mus. Cat. Nests and Eggs Austr. Bds.* p. 41 (1889); Sharpe, *Brit. Mus. Cat.* Vol. xvii. p. 169 (subsp.) (1892).

Adult male. Head and all the upper surface rich deep ultramarine, deeper on the upper wing-coverts and scapulars; lores and oblong neck spot rufous, quills blackish-brown, the inner webs towards the base margined with rufous, the outer webs of the secondaries blue; sides of the head and ear-coverts dark ultramarine, sides of the neck and a large patch extending down the sides of the body to the flanks deep ultramarine, throat buff; chest, centre of the breast, the abdomen and under tail-coverts, deep coppery-rufous; tail blue above like the back, black below; the flanks and under tail-coverts strongly washed with rose-lilac, under wing-coverts and axillaries deep coppery-rufous, the inner webs of the quills margined towards the base with a lighter tint of rufous; bill black, whitish at the tip; legs and feet orange. Total length 5.7 to 6 inches, wing 2.9, tail 1.4, tarsus 0.31, mid-toe 0.6, hind-toe 0.4, bill from forehead 1.7, from nostril 1.3, from gape 1.76.

Remarks. The females resemble the males in plumage. The young have the same barred appearance on the head as described in the previous species, *A. azurea*, from which this species chiefly differs in the intensity of the blue and deep rufous colors, it has also more of the rosy-lilac tint on the flanks and under tail-coverts.

Hab. Derby, N.W. Australia, Port Darwin and Port Essington, Gulf of Carpentaria, Cape York. (*Ramsay*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	From gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid Toe (s. v.)	Hind toe (s. v.)
A 1 ♂	6.8	3	1.62	2.05	1.7	2.25	0.35	0.32	0.4	0.55	0.25
A 2 ♂	6.5	3.1	1.65	2.07	1.75	2.3	0.4	0.22	0.4	0.53	0.3
A 3 ♂	5.5	3.1	1.5	1.9	1.4	2.05	0.38	0.3	0.4	0.52	0.28
A 4 ♀	5.5	2.9	1.45	1.75	1.35	2	0.35	0.29	0.4	0.52	0.3
A 5 ♀	6	3	1.5	1.75	1.35	2	0.35	0.3	0.4	0.52	0.23
A 6 ♂	6.15	2.9	1.5	1.85	1.5	2.15	0.37	0.3	0.4	0.53	0.25

- A 1 ♂ ad. sk., Barron River, Northern Queensland, 1887. Col.
 A 2 ♂ ad. sk., Riverstone, Cairns District, Northern Queensland (captured on the nest, 26th December, 1887). Col.
 A 3 ♂ ad. sk., Derby, North-western Australia, 1886. Col.
 A 4 ♀ ad. sk., Derby, North-western Australia, 1886. Col.
 A 5 ♀ ad. sk., Port Essington, February, 1879. Col.
 A 6 ♂ ad. sk., Port Essington, February, 1879. Col.

3. *Alcyone pusilla*.

Little Kingfisher.

Ceyx pusilla, Temm. *Pl. Col.* 595, fig. 3 (1836).

Alcyone pusilla, Reichb., *Handbk. Alced.* p. 7 (1851); Cass. *Cat. Halc. Phil. Mus.* p. 5 (1852); Macgill., *Voy. Rattles.* Vol. ii. p. 356 (1852); Sclat., *Proc. Linn. Soc.* p. 172 (1858); Rosenb., *Journ. of Orn.* p. 118 (1864); Gould, *Bds. Austr.* fol. Vol. ii. pl. 26 (1848); *id.* *Handb. Bds. Austr.* Vol. i. p. 142, sp. 72 (1865); Ramsay, *Proc. Zool. Soc.* p. 383 (1868); Sharpe, *Mon. Alced.* p. 53, pl. 16 (1868-71); Masters, *Proc. Linn. Soc. N.S.W.* Vol. i. p. 48, sp. 18 (1876); Ramsay, *Proc. Linn. Soc. N.S.W.* Vol. i. p. 179, sp. 73 (1876); Salvad., *Ann. Mus. Civ. Gen.* x. p. 301 (1877); Sharpe, *Journ. Proc. Linn. Soc.* p. 311 (1878); D'Alb. & Salvad., *Ann. Mus. Civ. Gen.* xiv. p. 48

(1879); *Selat., Proc. Zool. Soc.* pp. 447, 450 (1879);
Salvad., Orn. Pap. et Molucc. Vol. i. p. 414, sp. 194
 (1880); *Ramsay, Tab. List Austr. Bds.* p. 3, sp. 80 (1888);
Sharpe, Brit. Mus. Cat. Vol. xvii. p. 171 (1892).

Alcedo pusilla, *Schl., Mus. Pays-Bas, Alced.* p. 18 (1863);
Schl., Vög. Ned. Ind. Alced. pp. 12, 48, pl. 3 (1864).

Nu-rea-bin-mo, *Aborigines of the Coburg Peninsula* (Gould).

Adult male. Lores, and an oblong patch on the side of the neck behind the ear-coverts white; the whole of the head, neck, scapulars, back, rump, and upper tail-coverts, and tail above, rich ultramarine deep blue; tail feathers below, blackish-brown, the outermost pair without the blue on the outer webs above; wings black above, some of the secondaries narrowly margined with blue; all the quills blackish, with a narrow line of white on the base of the inner web, under surface of the quills similar but lighter; under wing-coverts white, a blackish spot on the small feathers of the under surface at the angle of the wing; ear-coverts and a stripe extending from below the lower mandible blue; a large blotch of the same color on the sides of the chest, but not extending across it; throat and remainder of the under surface and under tail-coverts white. Some specimens have a slight tinge of green on the forehead and wings. Bill black, feet orange. Total length 4.7, in wing 2.1, tail 0.95, bill 1.2, from the nostril 0.95, height at nostril 0.27, width 0.27, tarsus 0.3, mid toe 0.4.

The sexes are alike in plumage, the young have a greenish shade on the head and sides of the neck and of the breast, and on the upper wing-coverts and scapulars. The bluish-green of the forehead margins the tips of the feathers and gives that part a banded appearance.

Remarks. A fully adult specimen shot inland from Port Essington resembles the preceding, but is of a much lighter and brighter blue; there is a decided shade of green on the outer webs of the secondaries, contrasting with the blue of the scapulars; the ear-coverts, sides of the neck from below the base of the lower mandible extending to the chest and reaching down the flanks of the same rich bright blue as on the upper surface, from the flanks a very narrow streak of blue reaches to the under tail-coverts, which are also tipped with the same color; the blue from the sides of the chest almost join across the breast, leaving only a narrow broken band of white down the centre; a narrow line of blue extends from the angle of the wing on the under side to the base of the primaries, leaving a narrow white margin on the edge of the wing, remainder of the under wing-coverts white; the difference of the tint of blue, the greater extent of the color on the chest and sides of the body, and the blue margins on the

flank feathers and tips of the undertail coverts, tend to prove this to be a distinct species. The specimens of *A. pusilla*, from Rockingham Bay, Cairns, and New Guinea, are for the most part identical in coloration, and agree with Gould's and Sharpe's figures.

Hab. Port Darwin and Port Essington, Cape York, Rockingham Bay, South Coast of New Guinea. (*Ramsay.*)

Measurements of average sized specimens from different localities.

Sex.	Total length of skin.	Wing.	Tail.	Bill from forehead.	Bill from nostril.	Bill from gape.	Height of bill at nostril.	Breadth of bill at nostril.	Tarsus	Mid toe (s. v.)	Hind toe (s. v.)
A 1 ♀	4.4	2.05	1	1.3	1.05	1.45	0.26	0.22	0.3	0.43	0.2
A 2 ♀	4.4	2.15	1	1.3	1.05	1.45	0.26	0.22	0.3	0.47	0.21
A 3 ♂	4.3	2.15	1	1.3	1	1.43	0.25	0.2	0.3	0.42	0.21
A 4 ♂	4.7	2.1	1	1.25	1	1.4	0.25	0.22	0.3	0.46	0.2
A 5 ♂	4.2	2.1	1	1.2	0.98	1.38	0.25	0.22	0.32	0.42	0.2

A 1 ♀ ad. sk., Cairns, Northern Queensland, 1887.	Pch.
A 2 ♀ ad. sk., Cairns, Northern Queensland, 1887.	Pch.
A 3 ♂ ad. sk., Cairns, Northern Queensland, 1888.	Col.
A 4 ♂ ad. sk., Cairns, Northern Queensland, 1888.	Col.
A 5 ♂ ad. sk., Port Essington, February, 1879 (lighter phase).	Col.

ALPHABETICAL INDEX.

	Page		Page
Alcedo	1, 7, 17	lazulina (Dacelo)	13
Alcyone	17	leachii (Dacelo)	4
australis (Alcedo)	18		
australasiæ (Tudirhamphus) ...	8	macleayi (Cyanalcyon)	13
azurea (Alcedo)	17	macleayi (Halcyon)	13
azurea (Alcyone)	18	macleayi (Dacelo)	13
		macleayi (Tudirhamphus)	13
cervina (Paralcyon)	5		
cervina (Dacelo)	5	occidentalis (Dacelo) ...	6
cervinus (Dacelo)	5		
cervicalis (Dacelo)	5	Paralcyon	2, 5
Ceyx	18	Picariæ	1
chlorocephala (Dacelo)	7	pulchra (Alcyone)	20
cyanea (Ceyx)	18	pusilla (Alcyone)	21
Cyanalcyon	10, 13	pusilla (Alcedo)	22
		pyrrhopygius (Halcyon)	19
Daceloninæ	1	pyrrhopygius (Tudirhamphus) ..	10
Dacelo	1, 4, 5, 6, 8	pyrrhopygia (Cyanalcyon)	10
diemenensis (Alcyone)	19	pyrrhopygia (Halcyon)	9, 10
flavirostris (Syma)	15	sacra (Alcedo)	7
flavirostris (Halcyon)	15	sacra (Halcyon)	7
fusca (Alcedo)	1	sanctus (Halcyon)	7
		sanctus (Tudirhamphus)	7
gigas (Alcedo)	1	sancta (Sauropatis)	8
gigas (Dacelo)	1	sancta (Halcyon)	13
gigas (Paralcyon)	2	sancta (Dacelo)	8
gigantea (Dacelo)	1	sordidus (Tudirhamphus)	11
grayi (Sauropatis)	12	sordidus (Halcyon)	11
		sordida (Sauropatis)	12
Halcyones	1	sordida (Halcyon)	12
Halcyon	7, 9, 11, 12	sylvia (Tanysiptera)	16
		Syma	15
incinctus (Halcyon)	13		
		Uralcyon	16
jacquinoti (Halcyon)	13		

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